Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-40 (Cancelled)

41. (Currently Amended) A communications system which supports the mobility of wireless communications devices throughout a building, comprising:

at least one centralized computer;

a plurality of RF transceivers connected to the at least one centralized computer, the RF transceivers distributed throughout the building such that different transceivers provide coverage for different regions of the building, at least some of the RF transceivers of the plurality transmitting and receiving data on different RF channels; and

a plurality of wireless communications devices which communicate bi-directionally with the at least one centralized computer via the plurality of RF transceivers, the plurality of wireless communications devices communicating with the RF transceivers using a wireless time division multiple access (TDMA) protocol, the wireless TDMA protocol including a switchover protocol in which the wireless communications devices connect to different RF transceivers of the plurality based on assessments of RF link conditions between individual wireless communications devices and individual RF transceivers, the wireless TDMA protocol thereby supporting the mobility of the wireless communications devices between the different regions of the building

wherein ~~at least one of~~ the wireless communications devices maintain~~s~~ respective wireless connections with at least two different RF transceivers of the plurality of RF transceivers at all times~~at a time~~, and transmits a set of identical~~corresponding~~ data packets to the centralized computer via each of the at least two different RF transceivers simultaneously, and wherein the centralized computer selects one of the set of

identical~~corresponding~~ data packets received from the two different RF transceivers based upon error detection codes contained within the set of identical~~corresponding~~ data packets,

and further wherein the at least one wireless communications device transmits the set of identical~~corresponding~~ data packets to each of the at least two RF transceivers on different respective RF frequencies.

42. (Original) The communications system according to Claim 41, where the assessments of the RF link conditions are made by the wireless communications devices.

43-44. (Cancelled)

45. (Original) The communications system according to Claim 41, wherein the RF transceivers broadcast timeslot availability messages to the wireless communications devices, the timeslot availability messages indicating available and unavailable TDMA timeslots for communicating with the RF transceivers.

46. (Original) The communications system according to Claim 41, wherein at least some of the wireless communications devices are remote telemetry devices which collect and transmit physiologic data of respective patients.

47-56. (Cancelled)

57. (Previously Presented) The communications system according to Claim 41, wherein the RF channels are frequency division multiplexed channels.

58. (Previously Presented) The communication system according to Claim 41, wherein the plurality of RF transceivers comprises a first RF transceiver and a second RF

transceiver that operate on the same RF channel to provide frequency reuse, said first and second RF transceivers being spaced apart by a sufficient distance to avoid interference.

59. (Previously Presented) The communications system according to Claim 41, wherein each wireless communications device maintains a catalog containing, for each of a plurality of RF channels used by the RF transceivers, an indication of a quality of RF channel, and wherein the wireless communications devices use their respective catalogs to select RF transceivers with which to establish wireless connections.

60. (Previously Presented) The communications system according to Claim 41, wherein at least one of the wireless communications devices selects an RF transceiver with which to establish a connection based at least in part on bit error rates of transmissions received from the RF transceivers.

61. (Previously Presented) The communications system according to Claim 60, wherein the at least one wireless communications device selects an RF transceiver with which to establish a connection based further upon signal strength of the transmissions received from RF transceivers.

62. (Previously Presented) The communications system according to Claim 41, wherein at least some of the wireless communications devices transmit digitized waveform data to the centralized computer.

63. (Previously Presented) The communications system according to Claim 41, wherein at least some of the RF transceivers are mounted to a ceiling of the building.

64. (Previously Presented) The communications system according to Claim 41, wherein the RF transceivers and wireless communications devices implement an algorithm for tracking real time locations of the wireless communications devices.

65. (Currently Amended) A communications system which supports the mobility of wireless communications devices within a building, comprising:

a plurality of radio frequency (RF) transceiver units connected to a wired computer network to provide wireless access points to the wired computer network, the RF transceiver units spatially distributed throughout areas of the building to provide multiple coverage zones; and

a plurality of wireless communications devices that communicate by wireless communications with the plurality of RF transceiver units according to a wireless time division multiple access (TDMA) protocol in which the RF transceiver units assign timeslots to the wireless communications devices;

wherein the wireless communications devices and the RF transceiver units implement a switch-over protocol in which a wireless communications device connects to and disconnects form specific RF transceiver units of the plurality of RF transceiver units to maintain general connectivity to the wired computer network as the wireless communications device is moved across the multiple coverage zones

wherein ~~at least one of~~ the wireless communications devices maintain~~s~~ respective wireless connections with at least two different RF transceivers of the plurality of RF transceivers at all times~~at-a-time~~, and transmits a set of identical~~corresponding~~ data packets to the centralized computer via each of the at least two different RF transceivers simultaneously, and wherein the centralized computer selects one of the set of identical~~corresponding~~ data packets received from the two different RF transceivers based upon error detection codes contained within the set of identical~~corresponding~~ data packets,

and further wherein the at least one wireless communications device transmits the set of identical~~corresponding~~ data packets to each of the at least two RF transceivers on different respective RF frequencies.

66. (Previously Presented) The communications system as in Claim 65, wherein at least some of the plurality of RF transceiver units are mounted to a ceiling of the building.

67. (Previously Presented) The communications system as in Claim 65, wherein each RF transceiver unit broadcasts timeslot availability messages to the wireless communications devices.

68. (Previously Presented) The communications system as in Claim 65, wherein the wireless communications devices transmit data to the RF transceiver units according to a communications protocol that provides a combination of space, time and frequency diversity.

69. (Cancelled)

70. (Previously Presented) The communications system as in Claim 65, wherein each RF transceiver unit operates on one of multiple wireless channels, and the wireless communications devices switch between the multiple wireless channels to switch between RF transceiver units.

71. (Previously Presented) The communications system as in Claim 70, wherein at least two of the RF transceiver units that are spaced apart from each other by more than a predefined distance operate on a common channel of the multiple wireless channels to provide frequency reuse.

72. (Previously Presented) The communications system as in Claim 70, wherein each wireless communications device monitors the multiple wireless channels to make assessments of wireless link conditions offered by specific RF transceiver units, and uses the assessments to select RF transceiver units with which to establish wireless connections.

73. (Previously Presented) The communications system according to Claim 65, wherein at least one of the wireless communications devices selects an RF transceiver unit with which to establish a wireless connection based at least in part on a bit error rate of transmissions received from the RF transceiver unit.

74. (Previously Presented) The communications system according to Claim 73, wherein the at least one wireless communications device selects an RF transceiver unit with which to establish a connection based further upon signal strengths of the transmissions received from the RF transceiver unit.

75. (Previously Presented) The communications system as in Claim 65, wherein each RF transceiver unit is capable of maintaining wireless communications devices at a time.

76. (Previously Presented) The communications system as in Claim 65, wherein at least some of the wireless communications devices transmit real time electrocardiograph waveform data of patients to the wired computer network.

77. (Previously Presented) The communications system according to Claim 65, wherein at least some of the wireless communications devices transmit digitized waveform data to the wired computer network.

78. (Previously Presented) The communications system according to Claim 65, wherein the RF transceiver units and the wireless communications devices implement an algorithm for tracking real time locations of the wireless communications devices.

79. (Currently Amended) A communications system which supports the mobility of wireless communications devices within a building, comprising:

a plurality of radio frequency (RF) transceiver units connected to a wired computer network to provide wireless access points to the wired computer network, the RF transceiver units mounted in spatial distribution within the building to provide multiple coverage zones, each RF transceiver unit assigned to a wireless channel of a set of wireless channels; and

a plurality of wireless communications devices that communication by wireless communications with the plurality of RF transceiver units, each wireless communications device configured to switch between individual channels of the set of wireless channels to communicate with the RF transceiver units;

wherein the wireless communications devices and the RF transceiver units implement a switch-over protocol in which a wireless communications device connects to and disconnects from specific RF transceiver units of the plurality of RF transceiver units to maintain general connectivity to the wired computer network as the wireless communications device is moved across the multiple coverage zones; and

and wherein RF transceivers that are mounted within range of one another are assigned to different wireless channels set to avoid interference, and wherein at least two RF transceivers that are sufficiently spaced apart from each other to avoid interference are assigned to the same wireless channel to provide frequency reuse within the building

wherein ~~at least one~~ of the wireless communications devices maintain~~s~~ respective wireless connections with at least two different RF transceivers of the plurality of RF transceivers at all times~~at a time~~, and transmits a set of identicalcorresponding data packets to the centralized computer via each of the at least two different RF transceivers

simultaneously, and wherein the centralized computer selects one of the set of identical~~corresponding~~ data packets received from the different RF transceivers based upon error detection codes contained within the set of corresponding data packets,

and further wherein the at least one wireless communications device transmits the set of identical~~corresponding~~ data packets to each of the at least two RF transceivers on different respective RF frequencies.

80. (Previously Presented) The communications system according to Claim 79, wherein each channel of the set of wireless channels is a frequency division multiplexed channel.

81. (Previously Presented) The communications system according to Claim 79, wherein the RF transceiver units communicate with the wireless communications devices according to a wireless communications devices according to a wireless time division multiple access (TDMA) protocol.

82. (Previously Presented) The communications system as in Claim 81, wherein each RF transceiver unit broadcasts timeslot availability messages to the wireless communications devices to indicate TDMA timeslots that are available for use.

83. (Previously Presented) The communications system as in Claim 79, wherein each wireless communications device monitors the set of wireless channels to make assessments of wireless link conditions offered by specific RF transceiver units, and uses the assessments to select RF transceiver units with which to establish wireless connections

84. (Previously Presented) The communications system according to Claim 79, where at least one of the wireless communications devices selects an RF transceiver unit with

which to establish a wireless connection based at least in part on bit error rates of transmissions received from the RF transceiver units.

85. (Previously Presented) The communications system according to Claim 84, wherein the at least one wireless communications device selects an RF transceiver unit with which to establish a wireless connection based further upon signal strengths of the transmissions received from the RF transceiver units.

86. (Previously Presented) The communications system as in Claim 79, wherein each RF transceiver unit is capable of maintaining wireless connections with multiple wireless communications devices at a time.

87. (Previously Presented) The communications system as in Claim 79, wherein at least some of the wireless communications devices transmit real time electrocardiograph waveform data of patients to the wired computer network.

88. (Previously Presented) The communications system as in Claim 79, wherein at least some of the plurality of RF transceiver units are mounted to a ceiling of the building.

89. (Previously Presented) The communications system as in Claim 79, wherein the wireless communications devices transmit data to the RF transceiver units according to a communications protocol that provides a combination of space, time and frequency diversity.

90. (Previously Presented) The communications system as in Claim 79, wherein at least one of the wireless communications devices attempts to maintain wireless connections with at least two of the RF transceiver units at a time to provide redundant transmission paths for conveying data to the computer network.